

Add/Sub Decimals

Example A:

$7.27 + 2.9 =$

Solution:

$7.27 + 2.9 = 10.17$

$$\begin{array}{r} 7 . 2 7 \\ + 2 . 9 0 \\ \hline 1 0 . 1 7 \end{array}$$

6. $7.3 + 4.5 =$

7. $2.18 + 3.32 =$

Must show your work as the example above.

8. $7.1 + 5.2 =$

1. $1.25 + 9.6 =$

9. $9.8 + 2.06 =$

2. $7.5 + 3.5 =$

10. $7.5 + 8.3 =$

3. $4.5 + 7.5 =$

Example B:

$3.7 - 2.05 =$

Solution:

$3.7 - 2.05 = 1.65$

$$\begin{array}{r} 3 . 7 0 \\ - 2 . 0 5 \\ \hline 1 . 6 5 \end{array}$$

5. $7.5 + 3.5 =$

Must show your work as the example above.

11. $7.5 - 3.14 =$

18. $5.91 - 1.3 =$

12. $5.6 - 4.32 =$

19. $6.3 - 3.25 =$

13. $8.5 - 6.61 =$

20. $6.8 - 5.123 =$

14. $8.1 - 1.73 =$

Common Denominator

Equivalent fractions are fractions that have the same value. Equivalent fractions represent the same portion of an object. If we slice a pie into two equal pieces, one of the pieces is a half. Instead, if this pie is cut into 4 equal pieces, then two of these pieces is $\frac{2}{4}$ is equal to the size of a half-pie, so $\frac{2}{4} = \frac{1}{2}$.

15. $7.7 - 4.32 =$

You can discover more equivalent fractions by multiplying $\frac{2}{2}$, $\frac{3}{3}$, and $\frac{4}{4}$, etc. $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$, ... are called equivalent fractions.

16. $4.5 - 1.74 =$

Example C:

Find the values for a and b : $\frac{1}{3} = \frac{a}{6} = \frac{4}{b}$

$a =$

$b =$

17. $4.5 - 3.72 =$

Solution:

$$\frac{1}{3} = \frac{a}{6} = \frac{4}{b}$$

$$3 \times 2 = 6, \text{ so } 1 \times 2 = \underline{\underline{2}} = a$$

$1 \times 4 = 4$, so $3 \times 4 = \underline{12} = b$

Example D:

Find the values for a and b : $\frac{3}{4} = \frac{a}{8} = \frac{18}{b}$

$a =$

$b =$

Solution:

$\frac{3}{4} = \frac{a}{8} = \frac{18}{b}$

$4 \times 2 = 8$, so $3 \times 2 = \underline{6} = a$

$3 \times 6 = 18$, so $4 \times 6 = \underline{24} = b$

Question set [21 - 25]

Find the values of a and b in each of the following questions.

21. $\frac{2}{7} = \frac{a}{21} = \frac{8}{b}$

$a =$

$b =$

22. $\frac{a}{21} = \frac{25}{b} = \frac{5}{7}$

$a =$

$b =$

23. $\frac{a}{21} = \frac{6}{7} = \frac{24}{b}$

$a =$

$b =$

24. $\frac{5}{8} = \frac{15}{a} = \frac{b}{40}$

$a =$

$b =$

25. $\frac{a}{81} = \frac{2}{9} = \frac{b}{36}$

$a =$

$b =$

Example E:

Compare two fractions using common

denominator: $\frac{2}{3}, \frac{3}{4}$.

$\frac{2}{3} = \frac{\square}{\square} \quad \bigcirc \quad \frac{3}{4} = \frac{\square}{\square}$

Solution:

$\frac{2}{3} = \frac{8}{12} < \frac{3}{4} = \frac{9}{12}$

Example F:

Compare two fractions using common

denominator: $\frac{1}{2}, \frac{2}{5}$.

$$\frac{1}{2} = \frac{\square}{\square} \quad \bigcirc \quad \frac{2}{5} = \frac{\square}{\square}$$

Solution:

$$\frac{1}{2} = \frac{5}{10} \quad > \quad \frac{2}{5} = \frac{4}{10}$$

Must find (the least) common denominator before comparison.

$$26. \quad \frac{3}{5} = \frac{\quad}{20} \quad \bigcirc \quad \frac{3}{4} = \frac{\quad}{20}$$

$$27. \quad \frac{4}{6} = \frac{\quad}{24} \quad \bigcirc \quad \frac{5}{8} = \frac{\quad}{24}$$

$$28. \quad \frac{5}{6} \bigcirc \frac{2}{3} = \frac{\quad}{6}$$

$$29. \quad \frac{5}{9} \bigcirc \frac{2}{3} = \frac{\quad}{9}$$

$$30. \quad \frac{6}{9} \bigcirc \frac{1}{3} = \frac{\quad}{9}$$

$$31. \quad \frac{5}{8} \bigcirc \frac{2}{4} = \frac{\quad}{8}$$

$$32. \quad \frac{5}{12} \bigcirc \frac{3}{4}$$

$$33. \quad \frac{7}{24} \bigcirc \frac{1}{6} = \frac{\quad}{24}$$

$$34. \quad \frac{7}{36} \bigcirc \frac{1}{6} = \frac{\quad}{36}$$

$$35. \quad \frac{\quad}{12} = \frac{2}{3} \bigcirc \frac{5}{12}$$

$$36. \quad \frac{\quad}{24} = \frac{3}{8} \bigcirc \frac{1}{6} = \frac{\quad}{24}$$

$$37. \quad \frac{7}{12} \bigcirc \frac{3}{4} = \frac{\quad}{12}$$

$$38. \quad \frac{7}{18} \bigcirc \frac{5}{6} = \frac{\quad}{18}$$

$$39. \quad \frac{11}{16} \bigcirc \frac{3}{4} = \frac{\quad}{16}$$

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40. $\frac{\quad}{12} = \frac{3}{4} \bigcirc \frac{5}{12}$

Math Instinct

41. Jean, Jim, and Jack are triplet. If the total of their ages is 21, how old are they?

42. Gerald was 9 years old 5 years ago. If Frank is 12 years old now, who is older?

43. A puppy eats 6 pounds of food in 24 days. How many days will 12 pounds of food last?

44. Twenty-eight children are going on a picnic. If 4 children can ride in one car, how many cars are needed?

45. Sally earns a quarter a day helping her mom with the house chores. How many days she needs to work in order to save a total of \$15?

46. Steven used $1\frac{1}{2}$ pound of chocolate to make 40 chocolate chip cookies for his mom's office party. How many pounds of chocolate will he need to make 80 chocolate chip cookies?

47. Molly and Dan had 16 marbles altogether. When they finished playing, Dan said to Molly: "If you give me three of your marbles, we'd both have the same number of marbles."

(a) How many marbles did Molly have?

(b) How many marbles did Dan have?

48. Doris spent $\frac{2}{3}$ of her savings on a used car. If she had \$300 left, how much did she originally have in her saving account?

49. How many glasses of pineapple juice can be made in 5 min less than 3 hours if it takes 5 minutes to make a glass of pineapple juice?

50. Each pie was cut into 6 pieces. There were 306 pieces of pie. How many pies were used?

51. Two pencils and an eraser are sold for \$4.00. How much do four pencils and two erasers cost?

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52. Fifty-nine parents came to watch a baseball game. Seventeen left after the fourth inning. Twenty more parents arrived during the sixth inning. How many parents are watching the game at the end of the sixth inning?
53. David weighs one hundred sixty-five pounds less than his father. His father weighs two hundred sixty-one pounds. How much does David weigh?
54. Thirty-six students were divided into four equal groups. How many students were in each group?
55. If two pencils and an eraser are sold for \$4.60, and one pencil and two erasers are sold for \$4.10, how much do 6 pencils and 6 erasers cost?
56. Greg makes \$15 per hour. Greg worked 1 hour and 32 minutes yesterday and 2 hours and 28 minutes today. How much did Greg earn for working today and yesterday?
57. Albert had two dollars. Albert went to the market and spent 27¢ on plums, 30¢ on apples, and 21¢ on pears. How much money does Albert have left?
58. Elizabeth celebrated her birthday with her six best friends. Elizabeth had bought a package of 58 balloons. She gave each of her friends an equal number of balloons. If Elizabeth had four balloons left, how many did each friend get?
59. Destiny woke up at 6:30 A.M. and spent 2 minutes to brush her teeth, 9 minutes to eat breakfast, 9 minutes to take a shower, and 20 minutes to read the newspaper. What time was she ready to go to school?
60. Divide 1, 2, 3, 4, 5, 6, 7, 8, and 9 into three groups so that each group has three numbers and equal sum.

$\square + \square + \square = \square$
$\square + \square + \square = \square$
$\square + \square + \square = \square$

Answer Key

1. 10.85
2. 11
3. 12
4. 17.7
5. 11
6. 11.8
7. 5.5
8. 12.3
9. 11.86
10. 15.8
11. 4.36
12. 1.28
13. 1.89
14. 6.37
15. 3.38
16. 2.76
17. 0.78
18. 4.61
19. 3.05
20. 1.677
21. 6, 28
22. 15, 35
23. 18, 28
24. 24, 25
25. 18, 8
26. $\frac{3}{5} = \frac{12}{20} < \frac{3}{4} = \frac{15}{20}$
27. $\frac{4}{6} = \frac{16}{24} < \frac{5}{8} = \frac{15}{24}$
28. $\frac{5}{6} > \frac{4}{6}$
29. $\frac{5}{9} < \frac{2}{3}$
30. $\frac{6}{9} > \frac{1}{3}$
31. $\frac{5}{8} > \frac{2}{4}$
32. $\frac{5}{12} < \frac{3}{4}$
33. $\frac{7}{18} > \frac{1}{6}$
34. $\frac{3}{16} < \frac{1}{6}$
35. $\frac{2}{3} > \frac{5}{12}$
36. $>$
37. $<$
38. $<$
39. $>$
40. $>$
41. $21 \div 3 = 7$
42. $9 + 5 = 14$ (Gerald, older)
43. $24 \times 2 = 48$ days
44. $28 \div 4 = 7$ (cars)
45. $\$15 = 60$ quarters
60 days
46. $1\frac{1}{2} + 1\frac{1}{2} = 3$ lb
47. (a) 11 (b) 5
48. $300 \times 3 = \$900$
49. $175 \div 5 = 35$ glasses
50. $306 \div 6 = 51$ pies
51. $2 \times 4 = \$8.00$
52. $59 - 17 + 20 = 62$ parents
53. $261 - 165 = 96$
54. $36 \div 4 = 9$ students
55. 2 pencils + 1 eraser = 4.6
1 pencil + 2 erasers = 4.1
3 pencils + 3 erasers = 8.7
6 pencils + 6 erasers =
\$17.40
56. $1:32 + 2:28 = 4:00 = 4$ hours
 $4 \times 15 = \$60$
57. $200 - 27 - 30 - 21 = 122 =$
\$1.22
58. $58 - 4 = 54$
 $54 \div 6 = 9$ balloons
59. $2 + 9 + 9 + 20 = 40$
 $6:30 + 0:40 = 6:70 = 7:10$
A.M.
60. $1 + 2 + 3 + 4 + 5 + 6 + 7 +$
 $8 + 9 = 45$
 $45 \div 3 = 15$
 $1 + 5 + 9 = 15$
 $2 + 6 + 7 = 15$
 $3 + 4 + 8 = 15$

1, 5, 9
2, 6, 7
3, 4, 8